



Virginia Board for Geology

2000 Survey Results



Question 1 - In what field(s) of geology are you currently employed?

Oil	13
Gas	14
Coal	34
Minerals	48
Engineering Geology	129
Environmental Geology	346
Other	90
Not Working in Geo Field	13

Question 2 - In what state is your primary practice of geology?

Virginia	178
Other	320
No answer	4

Question 3 - In what area(s) of geology are you most interested?

Oil	36
Gas	33
Coal	48
Minerals	99
Engineering Geology	170
Environmental Geology	361
Other	96
Not Working in Geo Field	13

Question 4 – Indicate your degree(s) and field of study:

BS –	Geology	439
	Engineering	2
	Engineering geology	8
	Environmental geology	9
	Geophysics	5
	Physics	1
	Environmental Sciences	2
	Earth Science	2
	Resources management	1
	Civil engineering	3
	Math	1

	Geography	1
	Finance	1
	Biology	3
	Chemistry	4
	Geochemistry	3
	Education	2
	Mining Engineering	1
	Metallurgical Engr.	1
	Political science	1
	History	1
	Natural sciences	2
	Geomorphology	1
	Geophysical services	1
	Paleontology	1
	Sedimentation	1
	Groundwater	1
	Hydrogeology	1
	Earth & Planetary	1
	Soil Science	1
MS	Geology	91
	Engr. Geology	20
	Envir. Geology	18
	Other	81
Ph. D.	Geology	33
	Engr. Geology	1
	Envir. Geology	2
	Other	17

Question 5 - In what ways has your certification as a professional geologist in Virginia been beneficial to you.

1. Project sign-offs: 284
2. Procuring employment: 233
3. Advancement in employment 301
4. Certification by reciprocity or comity with another state: 223
5. Not beneficial: 102
6. No answer: 6
7. Other Answers:
 - a. Employed by US Government
 - b. Professional credibility
 - c. Recognition as professional
 - d. In education & engineering, all certificates important
 - e. Occasional need to assist personnel in Tennessee offices
 - f. Qualification in court
 - g. Increased salary
 - h. Expert witness

Question 6 - Would you like to receive regular information on geology-related issues for the Board in the form of an UPDATE or newsletter?

Yes	459
No	20
No answer	1

Question 7 - Do you believe that a mandatory Professional Geologist licensing program would be more beneficial to the citizens of Virginia than the current voluntary program?

Yes	323
No	134

Note:

100 of those who answered “Yes”, commented directly that the main reason for licensure was for the protection of the citizens of the Commonwealth. The need to eliminate those unqualified but currently performing geological services was typically mentioned in the same comment section.

113 of those who answered “Yes”, commented that the main reason for licensure was either because “all the other states are doing it” or to eliminate “unqualified competition.”

19 of those who answered “Yes”, commented that the main reason for licensure was because they wanted the same level of recognition as professional engineers.

Of the 134 who answered “No”, 92 obtained their certification through waiver of the examination and 19 obtained their certification through reciprocity. Several of the “No” responses stated that if laws were in place to require the signature of licensed geologists for certain types of projects that they would be in favor of mandatory licensure.

Question 8 – You became a Virginia Certified Geologist by:

Exam	95
Grandfathered	203
Reciprocity	107
Experience	68
No know or No answer	7

Question 9 – In what way(s) has your certification as a Virginia professional geologist been beneficial to the citizens of Virginia?

The responses were too varied to quantify to any degree. A listing of all of the responses received to this questions is located at the Department of Professional and Occupational Regulation. Please contact the Department at 804-367-8507 if you have any questions about the responses to number 9.

Question 10 – Please describe any known documentable situations where the public safety or health of Virginians were endangered or compromised by the actions of a non-certified individual. Describe how mandatory licensing may have prevented this occurrence.

Approximately 75% of the respondents had no comments or had no specific knowledge of any such situations. The remaining respondents noted the following hazardous situations:

In Virginia:

- Construction of dwellings in areas subject to shoreline erosion
- Non-geologists presenting erroneous geological information, some instilling fear in citizens to promote themselves or their agenda
- Poor judgement used as a result of gasoline vapors migrating into a basement
- Consultant that falsified data on reports to regulators

- Landslide during construction of I-23 Powell Valley/Big Stone Gap/Wise
- VDOT engineers not qualified to assess sinkholes along I-81 resulting in cave-ins
- Piney River, Va American Cyanamid
- Petroleum release Site Characterization Reports submitted to VDEQ with erroneous assessment of human health and environmental risks
- Earthen dam failures
- New Market – groundwater over pumping causing sinkholes
- Subsurface exploration conducted without utility marking in advance
- City of Norfolk – unlicensed home heating oil contractor created environmental hazards
- Soil and groundwater contamination encountered during UST removals by non-qualified individuals which were not reported to VDEQ.
- Landfill construction by contractors without understanding of potential for leaching of contaminants to groundwater.
- Risk assessments for groundwater contamination conducted in error by non-qualified individuals
- Highway or building construction with insufficient identification of sinkhole potential, threat to groundwater quality and inadequate subsurface characterization.
- Poor judgement in siting public water supply wells.
- Crossbed promoters marketing worthless mines where unsuspecting novices could be endangered
- Over pumping in Town of Round Hill, Loudoun County has created water supply problems
- Potential for cross-contamination in shallow aquifers is high because professional geologist supervision is not required for installation of monitoring wells
- Inappropriate construction/installation of private water-supply wells endangering health and property values
- Construction of buildings in the Valley without consideration of shrink-swell sites
- Removal of a leaking underground storage tank without reporting a release as required
- In relatively new field of utility engineering, non-qualified individuals have interpreted geophysical data in error, resulting in public safety hazards
- 1970s, North Anna Nuclear Power Plant constructed on a potentially active fault line. While conducting field studies, Tyler Community College professor informed site engineer of the fault (mylanite) zone
- Lee and Wise Counties, non-qualified engineer has misled citizens resulting in endangerment of public safety and health
- I-64 Afton Mountain, road cut into hillside with new surface parallel to bedding plan or rock fracture dip resulting in numerous rock fall and landslides ever since, proper engineering geology consultation could have mitigated this hazardous problem.
- Shallow private homeowner water wells contaminated by inadequately characterized upgradient petroleum release
- Slope failures and over pumping of wells could have been avoided if qualified geologist was required for project.

Non-Virginia situations:

- Cross-contamination of water-bearing zones by improper screen placement in monitoring wells.
- TN and GA, Mandatory licensing in these states provides a legal mechanism for preventing non-qualified individuals from endangering citizens.
- Several documentable NC incidents where unlicensed individuals had not properly assessed the extent of contaminant plumes that discharge into streams which flow into Virginia, impacting surface water quality. NCDENR did not accept the assessment report and client had to hire another contractor (respondent) to re-evaluate potential impacts. This proves that the NC mandatory program is successful.
- Maryland, anti-development activist presenting himself as geologist with no geology background has over estimated potential for drinking water contamination from proposed development and de-frauded citizens into paying him to fight development with legal action.

Other:

- Several individuals stated that mandatory licensure would provide stronger mechanism to pursue alleged offenses and thereby be more protective of citizens, their property and the environment.
- Several respondents noted that they had some experience with poor quality work conducted by non-qualified individuals which they believe would not have occurred had there been a mandatory and enforceable license program in Virginia.
- Conversely, some respondents stated that they did not believe that a mandatory program would prevent poor quality work by non-qualified individuals practicing geology.

Question 11 – Please list any issues you believe would be important for the Board to be aware of or to consider

Question 12 – Please submit any other thoughts you may have.

Approximately 75 % of respondents had no comments/issues.

Over 50 of the respondents thought that a mandatory program should be required for certain types of work, such as water-supply well applications/permits/wellhead protection plans and groundwater withdrawal applications, underground storage tank characterization reports, landfill permits, mining permits, stormwater management ponds/systems plans, subsurface sewage treatment system (e.g., drainfields) plans, and voluntary remediation program reports. A few commented that while the certification program is good, “let the buyer beware” does not adequately protect the citizens from un-qualified individuals who promise to provide services at a lower cost, potentially resulting in higher risks for endangerment or remedial expenditures. Very few did not want mandatory licensure. Several wanted the program further strengthened by including GIT, continuing education requirements, and addition of specialties for certification (e.g., hydrogeology, engineering geology, mining geology, etc.). Many respondents commented that the CPGs should have a more program more consistent with PE’s. Several also commented on poor qualifications of regulators (including VDEQ, VDH and VDOT) and they should be required to have a CPG review their decisions/plans to ensure the safety of citizens/environment of Virginia.

Many respondents commended the program (numerous commenting positively on the new lower fee structure) and several indicated that they appreciated the opportunity to provide input to the Board. Several even requested that the Board provide a newsletter and communicate information on a regular basis. Some asked for information regarding recent legislative matters pertaining to the field of geology. Most of these suggestions requested that communication (including future questionnaire distribution on an annual basis) be done via the Internet. Some respondents even suggested that we host meetings, seminars, field trips and even social gatherings to further improve communication. A few requested that we make a directory of all CPGs available. Apparently NC does this. Some requested that return postage be provided on future mailings.

Surprisingly review of the questionnaire responses indicates that many of our regulants appear to believe that the Board has much more control to make changes to the program and particularly that the Board is we are somehow connected to Virginia regulators such as in VDEQ, VDH and VDOT. The vast majority of the responses are issues and/or suggestions that are well beyond the scope of the Board, which indicates that the scope of our program is not fully understood by our regulants, much less the public in general.

Many requested that we assist with promoting the geology profession and help educate the public about our certification program and it’s benefits. A few requested that we provide guidance on use of the CPG seal on documents. Some wanted to know which states Virginia has reciprocity with.

Several respondents commented positively about transition to the ASBOG examination. A few respondents did not think it was fair or thought the examination blueprint was inappropriate. Several commented that a Virginia-specific examination should be required. Some did not understand why test scores are not provided to the applicants.